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specific topic.

PASSWORD:

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                 CAS REGISTRY enhanced with new experimental property tags
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NEWS
      3
         AUG 06
                 FSTA enhanced with new thesaurus edition
NEWS
         AUG 1.3
                 CA/CAplus enhanced with additional kind codes for granted
NEWS
         AUG 20
                 CA/CAplus enhanced with CAS indexing in pre-1907 records
NEWS
      5
         AUG 27
                 Full-text patent databases enhanced with predefined
NEWS
                 patent family display formats from INPADOCDB
NEWS
         AUG 27
                 USPATOLD now available on STN
         AUG 28
                 CAS REGISTRY enhanced with additional experimental
NEWS
      8
                 spectral property data
         SEP 07
                 STN AnaVist, Version 2.0, now available with Derwent
NEWS
                 World Patents Index
                 FORIS renamed to SOFIS
NEWS 10
         SEP 13
                 INPADOCDB enhanced with monthly SDI frequency
NEWS 11
         SEP 13
NEWS 1.2
         SEP 17
                 CA/CAplus enhanced with printed CA page images from
                 1967-1998
                 CAplus coverage extended to include traditional medicine
NEWS 13
         SEP 17
                 patents
                 EMBASE, EMBAL, and LEMBASE reloaded with enhancements
         SEP 24
NEWS 14
NEWS 15
         OCT 02
                 CA/CAplus enhanced with pre-1907 records from Chemisches
                 Zentralblatt
                 BEILSTEIN updated with new compounds
NEWS 16
         OCT 19
                 Derwent Indian patent publication number format enhanced
NEWS 17
         NOV 15
                 WPIX enhanced with XML display format
NEWS 18
         NOV 1.9
                 ICSD reloaded with enhancements
NEWS 1.9
         NOV 30
         DEC 04
                 LINPADOCDB now available on STN
NEWS 20
                 BEILSTEIN pricing structure to change
NEWS 21
         DEC 14
                 USPATOLD added to additional database clusters
         DEC 17
NEWS 22
                 IMSDRUGCONF removed from database clusters and STN
         DEC 17
NEWS 23
                 DGENE now includes more than 10 million sequences
         DEC 17
NEWS 24
NEWS 25
         DEC 17
                 TOXCENTER enhanced with 2008 MeSH vocabulary in
                 MEDLINE segment
                 MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
NEWS 26
         DEC 17
         DEC 17
                 CA/CAplus enhanced with new custom IPC display formats
NEWS 27
                 STN Viewer enhanced with full-text patent content
NEWS 28
         DEC 17
                 from USPATOLD
                 STN pricing information for 2008 now available
         JAN 02
NEWS 29
NEWS EXPRESS 19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
              CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.
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COST IN U.S. DOLLARS

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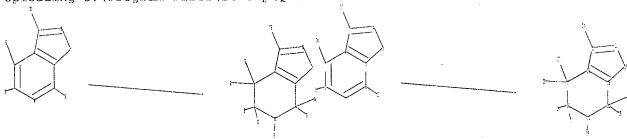
TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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http://www.cas.org/support/stngen/stndoc/properties.html

=> Uploading C:\Program Files\Stnexp\Queries\10570551:str



chain nodes :

11 12 13 14 24 25 26 27 28 29 30 31

ring nodes :

1 2 3 4 5 6 7 8 9 15 16 17 18 19 20 21 22 23

chain bonds :

2-13 3-14 6-12 7-11 15-28 16-26 16-30 17-27 17-29 20-25 20-31 21-24 ring bonds:

1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-9 7-8 8-9 15-16 15-20 16-17 17-18 18-19 18-21 19-20 19-23 21-22 22-23 exact/norm bonds:

7-8 7-11 15-16 15-20 16-17 17-18 18-19 18-21 19-20 19-23 21-22 21-24 22-23 exact bonds:

2-13 3-14 4-7 5-9 6-12 8-9 15-28 16-26 16-30 17-27 17-29 20-25 20-31 normalized bonds:

1-2 1-6 2-3 3-4 4-5 5-6 isolated ring systems: containing 1:

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 11:CLASS 12:CLASS 13:CLASS 14:CLASS 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom 22:Atom 23:Atom 24:CLASS 25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS 31:CLASS fragments assigned product role: containing 15 fragments assigned reactant/reagent role: containing 1

## L1 STRUCTURE UPLOADED

=> file casreact COST IN U.S. DOLLARS

SINCE FILE TOTAL ENTRY SESSION 0.46 0.67

FULL ESTIMATED COST

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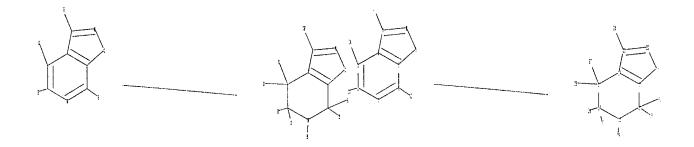
FILE CONTENT: 1840 - 29 Dec 2007 VOL 148 ISS 1

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Some CASREACT records are derived from the ZIC/VINITI database (1974-1999) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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Uploading C:\Program Files\Stnexp\Queries\10570551.str

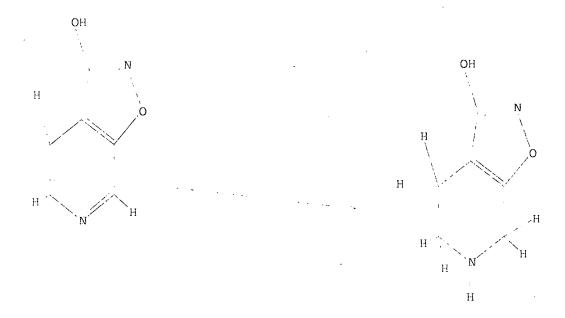


chain nodes : 11 12 13 14 24 25 26 27 28 29 30 31 ring nodes : 9 15 16 17 18 19 20 21 22 23 1 2 3 4 5 6 7 8 chain bonds : 2-13 3-14 6-12 7-11 15-28 16-26 16-30 17-27 17-29 20-25 20-31 21-24 ring bonds : 1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-9 7-8 8-9 15-16 15-20 16-17 17-18 18-19 18-21 19-20 19-23 21-22 22-23exact/norm bonds : 7-8 7-11 15-16 15-20 16-17 17-18 18-19 18-21 19-20 19-23 21-22 21-24 22-23 exact bonds : 2-13 3-14 4-7 5-9 6-12 8-9 15-28 16-26 16-30 17-27 17-29 20-25 20-31normalized bonds : 1-2 1-6 2-3 3-4 4-5 5-6 isolated ring systems : containing 1 :

Match level:
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 11:CLASS
12:CLASS 13:CLASS 14:CLASS 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom 22:Atom 23:Atom 24:CLASS 25:CLASS 26:CLASS 27:CLASS 28:CLASS
29:CLASS 30:CLASS 31:CLASS
fragments assigned product role:
containing 15
fragments assigned reactant/reagent role:
containing 1

L2 STRUCTURE UPLOADED

=> d 12 L2 HAS NO ANSWERS L2 STR



Structure attributes must be viewed using STN Express guery preparation.

SAMPLE SEARCH INITIATED 12:08:20 FILE 'CASREACT'

SCREENING COMPLETE - 0 REACTIONS TO VERIFY FROM 0 DOCUMENTS

100.0% DONE O VERIFIED O HIT RXNS 0 DOCS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*
: 0 TO

PROJECTED VERIFICATIONS:

O TO PROJECTED ANSWERS:

0 SEA SSS SAM L2 ( 0 REACTIONS) L3

=> s 12 full

FULL SEARCH INITIATED 12:08:24 FILE 'CASREACT'

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1.00.0% DONE 3 VERIFIED 2 HIT RXNS 1 DOCS

SEARCH TIME: 00.00.01

1 SEA SSS FUL L2 ( 2 REACTIONS) L4

=> d ibib abs fhit tot

```
ANSWER 1 OF 1 CASREACT COPYRIGHT 2008 ACS on STN
                         142:316828 CASREACT
ACCESSION NUMBER:
                         Method for the manufacture of THIP
TITLE:
                         Petersen, Hans; Bech Sommer, Michael; Dancer, Robert
INVENTOR(S):
                         H. Lundbeck A/S, Den.
PATENT ASSIGNEE(S):
                         PCT Int. Appl., 34 pp.
SOURCE:
                         CODEN: PIXXD2
DOCUMENT TYPE:
                         Patent
LANGUAGE:
                         English
FAMILY ACC. NUM. COUNT:
PATENT INFORMATION:
     PATENT NO.
                      KIND
                            DATE
                                           APPLICATION NO.
                                                            DATE
     _____
                      _ -- -- --
                            ______
                                           _____
                                          WO 2004-DK579
                                                            20040901
     WO 2005023820
                      A1
                            20050317
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             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
            NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
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AU 2004-270323 AU 2004270323 A1. 20050317 20040901 CA 2537840 A1. 20050317 CA 2004-2537840 20040901 20060607 EP 2004-762799 20040901 EP 1664060 A1. AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,

CN 2004-80025424 20040901 CN 1845928 Α 20061011 BR 2004-13741 20040901 BR 2004013741 Α 20061024 JP 2006-525046 20040901 JP 2007504179 T 20070301 MX 2006-PA2434 20060302 MX 2006PA02434 Α 20060620 Α IN 2006-CN779 20060303 IN 2006CN00779 20070622 NO 2006001424 Α 20060329 NO 2006-1424 20060329 US 2007112198 A1. 20070517 US 2006-570551 20060510

PRIORITY APPLN. INFO.: DK 2003-1277 20030905 US 2003-500422P 20030905 WO 2004-DK579 20040901

OTHER SOURCE(S):

MARPAT 142:316828

GII

SN, TD, TG

The present invention relates to a new method of preparing gaboxadol (THIP; I), which is useful for treating sleep disorders (no data). In particular a method of preparing THIP comprising reacting a compound II [R = alkyl, cycloalkyl, aryl, etc.; U = N, CR1 (R1 = H, R); W = O, S, NR4 (R4 = H, R)] or a salt thereof with an acid, typically a mineral acid, to obtain THIP as an acid addition salt. The present invention also relates to several intermediates. E.g., a multi-step synthesis of I.HBr, starting from Me

3-hydroxyisonicotinate, was given.

PRO 0 65202-63-3

REFERENCE COUNT:

```
RX(9) OF 15 COMPOSED OF RX(4), RX(5)
         J ===> 0
RX(9)
         Н
                                            H
                                                   Ò
                                                      NH
                                                      0
                                            Η
                            2
          Br
                          STEPS
                                             HBr
J
                                      YIELD 68%
RX(4)
          RCT
              J 847996-43-4
          RGT
              M 16940-66-2 NaBH4
          PRO
               ь 847996-44-5
               7732-18-5 Water, 64-17-5 EtOH
          SOL
          CON
              SUBSTAGE(1) <35 deg C
               SUBSTAGE(2) 24 hours
          NTE caution reagent foams on addition
          RCT : L 847996-44-5
RX(5)
            STAGE (1)
               RGT
                   P 7087-68-5 EtN(Pr-i)2, Q 79-22-1 ClCO2Me
               SOL
                    141-78-6 AcOEt
                    SUBSTAGE(1) room temperature
                    SUBSTAGE(2) 48 hours, room temperature
                    SUBSTAGE(3) room temperature -> 0 deg C
            STAGE (2)
               RGT
                   R 7664-41-7 NH3
               SOL
                    7732-18-5 Water
                    SUBSTAGE(2) 15 minutes
            STAGE(3)
               RGT S 10035-10-6 HBr
               SOL
                   64-19-7 AcOH
               CON SUBSTAGE(2) 6 hours, 40 deg C
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THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d his

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L2 STRUCTURE UPLOADED

L3 0 S L2

L4 1 S L2 FULL

=> log y

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FULL ESTIMATED COST 123.48 124.15

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)
SINCE FILE TOTAL ENTRY SESSION

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      3
        AUG 06
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NEWS
        AUG 1.3
                 CA/CAplus enhanced with CAS indexing in pre-1907 records
        AUG 20
NEWS
                 Full-text patent databases enhanced with predefined
NEWS
        AUG 27
                 patent family display formats from INPADOCDB
NEWS
        AUG 27
                 USPATOLD now available on STN
        AUG 28
                 CAS REGISTRY enhanced with additional experimental
NEWS
      8
                 spectral property data
                 STN AnaVist, Version 2.0, now available with Derwent
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NEWS
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NEWS 11
                 CA/CAplus enhanced with printed CA page images from
NEWS 12
         SEP 17
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                 CAplus coverage extended to include traditional medicine
NEWS 13
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NEWS 17
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                 WPIX enhanced with XML display format
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                 ICSD reloaded with enhancements
         NOV 30
NEWS 19
                 LINPADOCDB now available on STN
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                 BEILSTEIN pricing structure to change
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         DEC 1.7
NEWS 22
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NEWS 23
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                 MEDLINE segment
                 MEDLINE and LMEDLINE updated with 2008 MeSH vocabulary
         DEC 17
NEWS 26
         DEC 17
                 CA/CAplus enhanced with new custom IPC display formats
NEWS 27
NEWS 28
                 STN Viewer enhanced with full-text patent content
         DEC 17
                 from USPATOLD
                 STN pricing information for 2008 now available
         SO NAC
NEWS 29
              19 SEPTEMBER 2007: CURRENT WINDOWS VERSION IS V8.2,
NEWS EXPRESS
              CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
              AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.
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              For general information regarding STN implementation of IPC 8
NEWS TPC8
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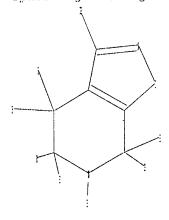
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http://www.cas.org/support/stngen/stndoc/properties.html

=> Uploading C:\Program Files\Stnexp\Queries\10570551C.str



chain nodes :

10 11 12 13 14 15 16 17

ring nodes :

1 2 3 4 5 6 7 8 9

chain bonds :

1-14 2-12 2-16 3-13 3-15 6-11 6-17 7-10

ring bonds :

1-2 1-6 2-3 3-4 4-5 4-7 5-6 5-9 7-8 8-9

exact/norm bonds :

1-2 1-6 2-3 3-4 4-5 4 - 75-6 5-9 7-8

exact bonds :

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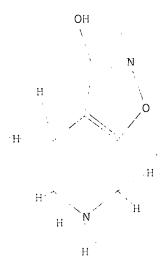
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## STRUCTURE UPLOADED L1

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L1 HAS NO ANSWERS

L1STR



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100.0% PROCESSED

9 ITERATIONS

0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED ITERATIONS:

9 TO 360

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PROJECTED ANSWERS:

0 TO

L2

O SEA SSS SAM L1

=> s 11 full

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FULL SCREEN SEARCH COMPLETED -

267 TO ITERATE

100.0% PROCESSED

267 ITERATIONS

36 ANSWERS

SEARCH TEME: 00.00.01

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FULL ESTIMATED COST

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FILE COVERS 1907 - 3 Jan 2008 VOL 148 ISS 1 FILE LAST UPDATED: 2 Jan 2008 (20080102/ED)

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http://www.cas.org/infopolicy.html

=> s 13 full L4 502 L3

=> s 13/prep full
502 L3
4508518 PREP/RL
L5 13 L3/PREP
(L3 (L) PREP/RL)

=> d ibib abs hitstr tot

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ANSWER 1 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN
                         2006:1177390 CAPLUS
ACCESSION NUMBER:
                         145:495605
DOCUMENT NUMBER:
                         Acid and base salt forms of gaboxadol
TITLE:
                         Crocker, Louis S.; Murry, Jerry A.; Nagapudi, Karthik;
INVENTOR(S):
                         Rubin, Kara Beth
                         Merck & Co., Inc., USA
PATENT ASSIGNEE(S):
                         PCT Int. Appl., 20pp.
SOURCE:
                         CODEN: PIXXD2
DOCUMENT TYPE:
                         Patent
LANGUAGE:
                         English
FAMILY ACC. NUM. COUNT:
                         1
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                                DATE
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                                                                   DATE
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                                            WO 2006-US15789
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     WO 2006118897
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             SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC,
             VN, YU, ZA, ZM, ZW
         RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
             IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BU,
             CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH,
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             KG, KZ, MD, RU, TJ, TM
PRIORITY APPLN. INFO.:
                                            US 2005-676332P
                                                                P 20050429
     The present invention is directed to novel acid salt forms and base salt
     forms of the compound gaboxadol (4,5,6,7-tetrahydroisoxazolo[5,4-c]pyridin-3-
     ol) and hydrates, solvates and polymorphic forms thereof. The invention
     is further concerned with pharmaceutical compns. containing the salt forms as
     an active ingredient, methods for treatment of disorders susceptible to
     amelioration by GABAA receptor agonism with the salt forms, and processes
     for the preparation of the salt forms.
IT
     914291-56-8P 914291-57-9P 914291-58-0P
     914291-59-1P 914291-60-4P 914291-62-6P
     914291-64-8P 914291-66-0P 914291-67-1P
     914291-68-2P 914291-69-3P 914291-71-7P
     914291-72-8P 914291-73-9P
     RL: PEP (Physical, engineering or chemical process); PYP (Physical
     process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL
     (Biological study); PREP (Preparation); PROC (Process); USES
     (Uses)
        (acid and base salt forms of gaboxadol)
     914291-56-8 CAPLUS
RN
     Tsoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, monoacetate (9CI)
CN
     (CA INDEX NAME)
     CM
          1.
          64603-91-4
     CRN
     CMF
          C6 H8 N2 O2
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HN NH

C

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CM
     CRN 64-19-7
     CMF C2 H4 O2
   0
но с снз
RN
     914291-57-9 CAPLUS
     Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-,
CN
     2-hydroxy-1,2,3-propanetricarboxylate (3:1) (9CI) (CA INDEX NAME)
     CM
          1.
     CRN
         64603-91-4
     CMF C6 H8 N2 O2
          2
     CM
     CRN
          77-92-9
          C6 H8 O7
     CMF
          СО2Н
HO2C CH2 C CH2 CO2H
          OH
     914291-58-0 CAPLUS
RN
     Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-,
CN
     (2E)-2-butenedioate (2:1) (9CI) (CA INDEX NAME)
     CM
         64603-91-4
     CRN
     CMF C6 H8 N2 O2
HN
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ни ин

CM 2

CRN 110-17-8 CMF C4 H4 O4

CRN 7664-38-2 CMF H3 O4 P

0

HO P OH

ОН

CRN 64603-91-4 CMF C6 H8 N2 O2

CM 2

CRN 87-69-4 CMF C4 H6 O6

Absolute stereochemistry.

ОН

RN 914291-62-6 CAPLUS

CN Butanedioic acid, compd. with 4,5,6,7-tetrahydroisoxazolo[5,4-c]pyridin-3(2H)-one (1:2) (9CI) (CA INDEX NAME)

CM 1.

CRN 64603-91-4 CMF C6 H8 N2 O2

CM 2

CRN 110-15-6 CMF C4 H6 O4

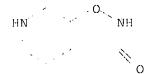
HO2C CH2 CH2 CO2H

RN 914291-64-8 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, sulfate (2:1) (9CI) (CA INDEX NAME)

CM 1.

CRN 64603-91-4 CMF C6 H8 N2 O2



CM 2

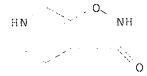
CRN 7664-93-9 CMF H2 O4 S 0

HO S- OH

0

RN 914291-66-0 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, calcium salt (2:1) (CA INDEX NAME)



●1/2 Ca

RN 914291-67-1 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, monopotassium salt (9CI) (CA INDEX NAME)

● K

RN 914291-68-2 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, magnesium salt (2:1) (CA INDEX NAME)

HN NH

●1/2 Mg

RN 914291-69-3 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, monosodium salt (9CT) (CA INDEX NAME)

Na

RN 914291-71-7 CAPLUS

CN Ethanaminium, 2-hydroxy-N,N,N-trimethyl-, salt with 4,5,6,7-tetrahydroisoxazolo[5,4-c]pyridin-3(2H)-one (1:1) (9CI) (CA INDEX NAME)

CM 1

CRN 914291-70-6 CMF C6 H7 N2 O2

CM 2

CRN 62-49-7 CMF C5 H14 N O

Me3+N CH2 CH2 OH

RN 914291-72-8 CAPLUS

CN L-Lysine, compd. with 4,5,6,7-tetrahydroisoxazolo[5,4-c]pyridin-3(2H)-one (1:1) (9CI) (CA INDEX NAME)

CM 1.

CRN 64603-91-4 CME C6 H8 N2 O2

CM 2

CRN 56-87-1 CMF C6 H14 N2 O2

Absolute stereochemistry.

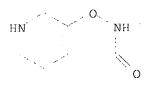
$$_{\text{HO}_2\text{C}}$$
  $_{\text{S}}$   $_{\text{(CH}_2)_4}$   $_{\text{NH}_2}$ 

RN 914291-73-9 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, compd. with N,N-bis(phenylmethyl)-1,2-ethanediamine (1:1) (9CI) (CA INDEX NAME)

CM 1.

CRN 64603-91-4 CMF C6 H8 N2 O2



CM 2

CRN 14165-27-6 CMF C16 H20 N2

CH<sub>2</sub> Ph

Ph CH<sub>2</sub> N CH<sub>2</sub> CH<sub>2</sub> NH<sub>2</sub>

2

REFERENCE COUNT:

THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 2 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN 2006:1009629 CAPLUS ACCESSION NUMBER: DOCUMENT NUMBER: 145:383399 Gaboxadol forms, compositions thereof, methods for TITLE: preparation and uses for treating sleep disorders Almarsson, Orn; Hickey, Magali Bourghol; Peterson, INVENTOR (S): Matthew Transform Pharmaceuticals, Inc., USA PATENT ASSIGNEE(S): SOURCE: PCT Int. Appl., 56pp. CODEN: PIXXD2 DOCUMENT TYPE: Patent English LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION: DATE PATENT NO. KIND DATE APPLICATION NO. \_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_\_\_ WO 2006-US9737 20060928 20060317 WO 2006102093 A1. W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM 20071212 EP 2006-738759 EP 1863808 A1. AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI; LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, ER, MK, YU US 2005-663423P PRIORITY APPLN. INFO.: P 20050318 WO 2006-US9737 W 20060317 The invention provides novel gaboxadol forms and methods fo making and AΒ using the same. These forms include salts, hydrates, solvates, and polymorphs of gaboxadol with improved aqueous solubility when compared to known gaboxadol forms. The invention also provides novel compns. comprising these novel soluble forms and a suitable carrier. The invention also provides related methods of treatment. Compns. and methods of the invention of the invention have a number of uses, including the treatment or prevention of sleep disorders. 815574-58-4P, Gaboxadol monohydrate 910641-51-9P TT RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (gaboxadol forms, compns. thereof, methods for preparation and uses for treating sleep disorders) 815574-58-4 CAPLUS RN

Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, monohydrate (9CI)

HN NH

(CA INDEX NAME)

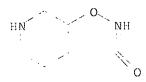
CN

910641-51-9 CAPLUS RN

Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, CN(2Z)-2-butenedioate (9CI) (CA INDEX NAME)

CM 1.

CRN 64603-91-4 CMF C6 H8 N2 O2



CM

CRN 1.10-1.6-7 CMF C4 H4 O4

Double bond geometry as shown.

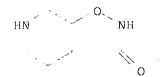
CO2H

64603-91-4P, Gaboxadol TT

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (gaboxadol forms, compns. thereof, methods for preparation and uses for treating sleep disorders)

RN 64603-91-4 CAPLUS

Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro- (CA INDEX NAME) CN



REFERENCE COUNT:

THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS 1. RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 3 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN 2006:795633 CAPLUS ACCESSION NUMBER: 145:217970 DOCUMENT NUMBER: Polymorphic forms of a GABA agonist TITLE: Kumke, Daniel J.; Murry, Jerry A.; Simmons, Bryon L.; INVENTOR (S): Xu, Feng Merck & Co., Inc., USA PATENT ASSIGNEE(S): PCT Int. Appl., 12pp. SOURCE: CODEN: PIXXD2 Patent DOCUMENT TYPE: English LANGUAGE: FAMILY ACC. NUM. COUNT: PATENT INFORMATION: DATE DATE PATENT NO. KIND APPLICATION NO. \_\_\_\_\_ \_\_\_\_\_\_ \_\_\_\_ \_\_\_\_\_ 20060810 WO 2006-US2809 20060126 A2 WO 2006083682 Α3 20070405 WO 2006083682 AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA AZ 20071031 EP 2006-719602 20060126 AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, EP 1848420 IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU P 20050128 PRIORITY APPLN. INFO.: US 2005-648151P W 20060126 WO 2006-US2809 The present invention is directed to novel polymorphic forms of AB 4,5,6,7-tetrahydroisoxazolo[5,4-c]pyridin-3-ol hydrate (gaboxadol monohydrate). The invention is further concerned with pharmaceutical treatment of disorders susceptible to amelioration by GABAA receptor polymorphic forms. Gaboxadol-HCl was dissolved in water-isopropanol and was aged for hours at ambient temperature. The resulting white solid was

compns. containing the polymorphic forms as an active ingredient, methods for agonism with the polymorphic forms, and processes for the preparation of the was treated with 1 equiv of 5N NaOH. The solution was stirred and the slurry filtered and air dried to give the gaboxadol monohydrate form III.

815574-58-4P, Gaboxadol monohydrate TT RL: PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (polymorphic forms of GABA agonist)

815574-58-4 CAPLUS RN

Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, monohydrate (9CI) CN (CA INDEX NAME)

● H2O

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ANSWER 4 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER:

2005:686172 CAPLUS

DOCUMENT NUMBER:

143:179592

TITLE:

Crystalline forms of a GABAA agonist, gaboxadol for treatment of neurological and psychiatric disorders

Cooper, Vincent Brett

INVENTOR(S):

PATENT ASSIGNEE(S):

SOURCE:

Merck Sharp & Dohme Limited, UK

Brit. UK Pat. Appl., 19 pp.

CODEN: BAXXDU

DOCUMENT TYPE:

Patent English

LANGUAGE:

h.

TT

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

bΝ	TENT				KIN!		DATE			APE	PLICA	TION	NO.		E	ATE		
	2410	434			Α		2005						7			0050		
US	2005	1711	42		A.1.			0804		US	2005	-4576	8		20050128			
	7262				В2		2007	0828										
ΑU	2005	2094	73		A1.		2005	0811	AU 2005-209473									
CA	2554	536			A1		2005	081.1.					1536					
. MC	2005				A2		2005					-GB28			20050128			
	W:												BW,					
													EG,					
													KG,					
													MW,				NI,	
													SE,					
													VN,					
	RW:												TZ,				,	
													CH,				-	
													LU,					
							BF,	ВJ,	CF,	CG	3, CI	, CM	GA,	GN,	GQ,	GW,	ML,	
			NΕ,	SN,	TD,	ΤG									,		4.0.0	
EE	1713				A2								040			0050		
	R:												LU,			MC,	БЛ.	
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	1 1914				Α		2007						3161			20050		
	2005						20070529 BR 2005-6858											
JI	JP 2007519697 T				20070719 JP 2006-550301 20070622 IN 2006-DN4184 20060828 MX 2006-PA8595								20050					
	IN 2006DN04184						2007			IN	2006	-DN4.	1.84			20060		
	MX 2006PA08595						2006									20060		
	KR 2007007070				Α		2007					-715				20060		
	2006				Α		2006					-384				20060		
	2007				A1.		2007	1108		US	2007	-827	570 B		- 1	20070		
PRIORIT	Y APP	LN.	INFO	.:												20040		
													8			20050		
										WO	2005	-GB2	88		W 2	20050	TSR	

Two new crystalline monohydrates and two new crystalline anhydrates of AB gaboxadol are

disclosed together with methods for preparing them. The methods comprise dissolving an acid salt of gaboxadol in water, adjusting the pH to pH 6.5 and either collecting the precipitate immediately or allowing it to age for 12

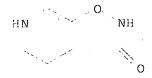
The crystalline gaboxadol is intended for use in the treatment of neurol. or psychiatric disorders susceptible to amelioration by GABAA receptor agonist. Thus, a solution of gaboxadol hydrochloride was treated with sufficient triethylamine to give a pH of 6.5. The resulting white solid was collected, filtered and air dried giving gaboxadol monohydrate Form I. 815574-58-4P

RL: PNU (Preparation, unclassified); PRP (Properties); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(crystalline forms of gaboxadol for dosage forms for treatment of neurol. or psychiatric disorders susceptible to amelioration by GABAA receptor agonism)

RN 815574-58-4 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, monohydrate (9CI) (CA INDEX NAME)



■ H2O

IT 64603-91-4P, Gaboxadol

RL: PNU (Preparation, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (crystalline forms of gaboxadol for dosage forms for treatment of neurol. or psychiatric disorders susceptible to amelioration by GABAA receptor agonism)

RN 64603-91-4 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro- (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 5 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN

2005:238996 CAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER:

142:316828

TITLE:

Method for the manufacture of THIP

Petersen, Hans; Bech Sommer, Michael; Dancer, Robert INVENTOR(S):

PATENT ASSIGNEE(S): SOURCE:

H. Lundbeck A/S, Den. PCT Int. Appl., 34 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

GII

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.				KIND DATE		APPLICATION NO.										
WO 2	WO 2005023820						WO 2004-DK579									
	W: AE,	AG, A	ΔL, Al	1, AT	, AU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,	
	CN,	CO, C	CR, CI	J, CZ	, DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FI,	GB,	GD,	
	GE,	GH, G	SM, HI	≀, HU	, ID,	IL,	IN,	IS,	JP,	KΕ,	KG,	ΚP,	KR,	KZ,	LC,	
	LK,	LR, I	S, L	l, LU	, LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NA,	NΙ,	
	NO,	NZ, C	OM, PO	G, PH	, PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SY,	
	TJ,	TM, T	EN, TI	R, TI	, TZ,	UA,	UG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW	
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	AZ,	BY, K	KG, K	i, MI	, RU,	TJ,	TM,	АΤ,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	
	EE,	ES, E	FI, FI	R, GE	, GR,	HU,	IE,	IT,	LU,	MC,	ΝL,	PL,	PT,	RO,	SE,	
	SI,	SK, T	r, B	r, BJ	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	NE,	
		TD, T			4											
AU 2	200427032															
CA 2	2537840			A.1.	2005	0317	(	CA 2	004-	2537	840		21	0040	901.	
EP 1				<b>A1</b> .	2006	0607	]	EP 2	004-	7627	99		2	0040.	901.	
	R: AT,	BE, C	CH, D	E, DK	, ES,	FR,	GB,	GR,	IT,	LΙ,	LU,	ΝL,	SE,	MC,	PT,	
	JE,	SI, I	T, E	Z, FI	, RO,	MK,	CY,	ΑL,	TR,	BG,	CZ,	EE,	HU,	PL,	SK,	HR
CN 1	1845928			Ą												
BR 2	200401374	1.1.		1	2006	1024	ì	BR 2	004-	1374	1.		2	0040	901.	
JP 2	JP 2007504179			ľ			JP 2006-525046									
MX 2	2006PA02	134		4	2006	0620	]	MX = 2	006-	PA24	34		2	0060	302	
IN 2	2006CN00°	779		Ą	2007	0622			006-0					0060		
NO 2	NO 2006001424			A	2006	0329			006-					0060	329	
US 2	200711219	98		<b>A.1</b> .	2007	0517			006-					0060		
PRIORITY	APPLN.	ENFO.:	:				1	DK 2	003-	1277			A 2	0030	905	
							1	US 2	003-	5004.	22P		P 2	0030	905	
									004-				w 2	0040	901.	
OTHER SOU	OTHER SOURCE(S):				CT 1.4	2:31	6828	; MA	RPAT	142	:316	828				

НО II

The present invention relates to a new method of preparing gaboxadol (THIP; AB I), which is useful for treating sleep disorders (no data). In particular a method of preparing THIP comprising reacting a compound II [R = alkyl,cycloalkyl, aryl, etc.; U = N, CR1 (R1 = H, R); W = O, S, NR4 (R4 = H, R)

or a salt thereof with an acid, typically a mineral acid, to obtain THIP as an acid addition salt. The present invention also relates to several intermediates. E.g., a multi-step synthesis of I.HBr, starting from Me 3-hydroxyisonicotinate, was given.

TT 65202-63-3P

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(method for the manufacture of THIP)

RN 65202-63-3 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, monohydrobromide (9CI) (CA INDEX NAME)



● HBr

REFERENCE COUNT:

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 6 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:720824 CAPLUS

DOCUMENT NUMBER: 141:306879

Gaboxadol (Lundbeck/Merck) TITLE:

Huckle, Richard AUTHOR(S):

Innovation Center, Actelion Ltd, Allschwil, CH-4123, CORPORATE SOURCE:

SOURCE: Current Opinion in Investigational Drugs (Thomson

Scientific) (2004), 5(7), 766-773

CODEN: COIDAZ; ISSN: 1472-4472

Thomson Scientific PUBLISHER: Journal; General Review DOCUMENT TYPE:

English LANGUAGE:

A review. H Lundbeck A/S, in collaboration with Merck & Co Inc, is developing gaboxadol, a GABAA agonist, for the potential treatment of sleep disorders. The compound is currently undergoing phase III clin. trials.

64603-91-4P, Gaboxadol. TT

RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of action); PAC (Pharmacological activity); PKT (Pharmacokinetics); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(GABAA agonist gaboxadol for potential treatment of sleep disorders)

RN64603-91-4 CAPLUS

Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro- (CA INDEX NAME) CN

REFERENCE COUNT: 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT L5 ANSWER 7 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1995:726673 CAPLUS

DOCUMENT NUMBER: 123:169581

AUTHOR(S):

TITLE: Partial GABAA Receptor Agonists. Synthesis and in

Vitro Pharmacology of a Series of Nonannulated Analogs

of 4,5,6,7-Tetrahydroisoxazolo[4,5-c]pyridin-3-ol Frolund, Bente; Kristiansen, Uffe; Brehm, Lotte;

Hansen, Annette B.; Krogsgaard-Larsen, Povl; Falch,

Erik

CORPORATE SOURCE: PharmaBiotec Research Center, Royal Danish School of

Pharmacy, Copenhagen, DK-2100, Den.

SOURCE: Journal of Medicinal Chemistry (1995), 38(17), 3287-96

CODEN: JMCMAR; ISSN: 0022-2623

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 123:169581

5-(4-Piperidinyl)3-isoxazolol (4-PIOL), a structural analog of 4-aminobutanoic acid (GABA) and the GABAA agonist 4,5,6,7tetrahydroisoxazolo[5,4-c]pyridin-3-ol (THIP), is a low-efficacy partial GABAA agonist. A number of compds. bioisosterically derived from 4-PIOL, including 5-(4-piperidinyl)-3-isothiazolol, 3-(4-piperidinyl)-5-isoxazolol 5-(1,2,3,6-tetrahydropyrid-4-yl)-3-isoxazolol, and 5-(1,2,3,6-tetrahydropyrid-4-yl)tetrahydropyrid-4-yl)isothiazol-3-ol, were synthesized and tested as GABAA receptor ligands. Whereas none of these compds. significantly affected GABAB receptor binding or GABA uptake, they showed affinities for GABAA receptor sites in the low-micromolar range. Using cultured cerebral cortical neurons and whole-cell patch-clamp techniques, the efficacies of these compds. relative to that of the full GABAA agonist, isoguvacine (20  $\mu$ M), were determined The relative efficacy of 5-(4-piperidinyl)-3isothiazolol , which has a higher receptor affinity (IC50 =  $1.3~\mu\text{M}$ ) than 4-PIOL (IC50 =  $9.3 \mu M$ ), was comparable with that of 4-PIOL (30-35%). The tetrahydropyridine analog of 4-PIOL, compound 5-(1,2,3,6-tetrahydropyrid-4-yl)-3-isoxazolol, showed a markedly lower receptor affinity (IC50 = 32  $\mu$ M) and apparently a lower relative efficacy than 4-PTOL. The corresponding unsatd. analog of 5-(4-piperidinyl)-3-isothiazolol , compound 14, showed a slightly weaker receptor affinity (TC50 = 4.0  $\mu\text{M})$  but a significantly higher relative efficacy (50-55%) than 5-(4-piperidinyl)-3-isothiazolol . The 5-isoxazolol isomer of 4-PIOL, compound 3-(4-piperidinyl)-5-isoxazolol, showed a reduced receptor affinity (IC50 =  $26 \mu M$ ) and a very low relative efficacy. Substitution of propanoic or propenoic acid moieties for the acidic heterocyclic units of these compds. gave the monocyclic amino acid derivs., which have very little or no affinity for GABAA receptor sites.

TT 64603-91-4DP, Isoxazolo[5,4-c]pyridin-3(2H)-one,

4,5,6,7-tetrahydro, analogs

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(THIP; preparation of isoxazolo[5,4-c]pyridinone analogs as GABAa agonists)

RN 64603-91-4 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro- (CA INDEX NAME)

0

HN NH

L5 ANSWER 8 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER:

1992:591577 CAPLUS

DOCUMENT NUMBER:

117:191577

TITLE:

3-Hydroxyisoxazole bioisosteres of GABA. Synthesis of

a series of 4-substituted muscimol analogs and

identification of a bicyclic 2-isoxazoline

rearrangement product

AUTHOR(S):

Hjeds, Hans; Christensen, Inge T.; Cornett, Claus; Froelund, Bente; Falch, Erik; Pedersen, Joergen B.;

Krogsgaard-Larsen, Povl

CORPORATE SOURCE:

PharmaBiotec Res. Cent., R. Dan. Sch. Pharm.,

Copenhagen, DK-2100, Den.

SOURCE:

Acta Chemica Scandinavica (1992), 46(8), 772-7

CODEN: ACHSE7; ISSN: 0904-213X

DOCUMENT TYPE:

Journal English

LANGUAGE:
OTHER SOURCE(S):

CASREACT 117:191577

GI

RCH<sub>2</sub>CH<sub>2</sub> OH

H<sub>2</sub>NCH<sub>2</sub> O

T

AB 3-Hydroxy-4-(2-hydroxyethyl)-5-methylisoxazole was used as the starting material for the syntheses of the muscimol analogs I (R = OH, Cl, OAc). Whilst muscimol is a very potent agonist at GABAA receptors, I did not show significant affinity for GABAA receptor sites in vitro.

TT 65202-63-3P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 65202-63-3 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, monohydrobromide (9CI) (CA INDEX NAME)

HN. O

.

HBx

L5 ANSWER 9 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1984:465548 CAPLUS

DOCUMENT NUMBER: 101:65548

ORIGINAL REFERENCE NO.: 101:9975a,9978a

TITLE: Analgesic GABA agonists. Synthesis and

structure-activity studies on analogs and derivatives

of muscimol and THIP

AUTHOR(S): Haefliger, Walter; Revesz, Laszlo; Maurer, Richard;

Roemer, Dietmar; Buescher, Heinz Hermann

CORPORATE SOURCE:

Sandoz Ltd., Basel, CH-4002, Switz.

SOURCE:

European Journal of Medicinal Chemistry (1984), 19(2),

149-56

CODEN: EJMCA5; ISSN: 0009-4374

DOCUMENT TYPE: LANGUAGE:

Journal English

OTHER SOURCE(S):

CASREACT 101:65548

As series of analogs, and derivs. (prodrugs) of muscimol and THIP were prepared and their GABA receptor affinity, analgesic, and GABAergic properties examined Some compds. designed as prodrugs exhibited high GABA receptor affinity indicating that nonzwitterionic mols. interact with GABA receptors. Analgesic and GABAergic activities of muscimol prodrugs were pronounced but weaker than muscimol itself. A ring opened THIP derivative was inactive whereas its carbamate derivative showed analgesic and GABAergic activity. A benzophenone-imine derivative showed strong GABA binding but no analgesic activity. Carbamate type THIP prodrugs were also active in analgesic and anticonvulsive tests but weaker than THIP itself. Esterand alkanoyloxymethyl prodrugs were only active in the hot plate test. When the inactive 7-methyl-THIP was converted to a potential prodrug it produced high GABA-mimetic activity in both anticonvulsant and analgesic tests. In all cases, sedation was inseperable from analgesia.

TT 64603-91-4DP, derivs.

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation and GABA agonist activity of, mol. structure in relation to)

RN 64603-91-4 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro- (CA INDEX NAME)

HN NH

ANSWER 10 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1982:562964 CAPLUS

97:162964 DOCUMENT NUMBER:

ORIGINAL REFERENCE NO.: 97:27185a,27188a

Isoxazolo[5,4-c]pyridines which are GABA-agonists TITLE:

Krogsgaard-Larsen, Povl INVENTOR (S):

PATENT ASSIGNEE(S): Lundbeck, H., og Co. A/S, Den.

Can., 29 pp. Division of Can. Appl. No. 305,798. SOURCE:

CODEN: CAXXA4

DOCUMENT TYPE:

Patent English

LANGUAGE: FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
CA 1125288	A2	19820608	CA 1981-377128		19810507
CA 1107736	A1.	19810825	CA 1978-305798		19780620
US 4301287	Α	19811117	US 1979-104080		19791217
PRIORITY APPLN. INFO.:			GB 1977-25740	A	19770620
			CA 1978-305798	Α3	19780620
			US 1978-917118	Α3	19780619
Omiton COLLIGIT (C)	MADDAM	07.162064			

OTHER SOURCE(S):

GI

Piperidinecarboxylic acid compds. I (R = Ac, carbalkoxy, carbophenoxy, CPh3, CHO; Z = ketalized O; R1 = halo, OH, alkoxy) reacted with HONH2 to yield hydroxamic acids II. Isoxazolo[5,4-c]pyridine derivative III, which is an agonist of H2N(CH2)3CO2H, was prepared from II. I (R = CO2Me, R1 = OEt, Z = OCH2CH2O) reacted with HONH2 to give II (R = CO2Me, Z = OCH2CH2O), and the latter was treated with HCl and then with HBr-HOAc to give III. HBr.

64603-91-4P 65202-63-3P TT

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and use of, as gamma-aminobutyric acid agonist)

64603-91-4 CAPLUS RN

Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro- (CA INDEX NAME) CN

65202-63-3 CAPLUS RN

Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, monohydrobromide CN (9CI) (CA INDEX NAME)

● HBr

ANSWER 11 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1982:527546 CAPLUS

DOCUMENT NUMBER: 97:127546

ORIGINAL REFERENCE NO.: 97:21173a,21176a

Deuterium labeling of the GABA agonists THIP, TITLE:

piperidine-4-sulfonic acid, and the GABA uptake

inhibitor THPO

Krogsgaard-Larsen, Povl; Johansen, Joergen Stage; AUTHOR(S):

Falch, Erik

Dep. Chem. BC, R. Dan. Sch. Pharm., Copenhagen, CORPORATE SOURCE:

DK-2100, Den.

Journal of Labelled Compounds and Radiopharmaceuticals SOURCE:

(1982), 19(5), 689-702

CODEN: JLCRD4; ISSN: 0362-4803

DOCUMENT TYPE:

Journal English LANGUAGE:

GI

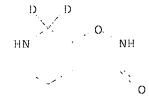
The D-labeled title compds. (I, II , and III, resp.) were prepared I and III were prepared from IV (X = CH2, X1 = NCO2Me; X = NCO2Me, X1 = CH2), AB resp., by sequential methylation, N-decarboxylation, nitrosation, H-D exchange reaction with D2O (acid- and base-catalyzed, resp.), denitrosation, and demethylation. Pt-catalyzed deuteration of pyridine-4-sulfonic acid in D2O gave II.

TT82988-63-4P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

82988-63-4 CAPLUS RN

Isoxazolo[5,4-c]pyridin-3(2H)-one-7-d, 4,5,6,7-tetrahydro-7-d- (9CI) (CA)CN INDEX NAME)



ANSWER 12 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN L5

ACCESSION NUMBER: 1979:439458 CAPLUS.

DOCUMENT NUMBER: 91:39458

ORIGINAL REFERENCE NO.: 91:6437a,6440a

Methyl tetrahydrohydroxy isoxazolopyridine carboxylate TITLE: '

INVENTOR(S): Krogsgaard-Larsen, Povl

PATENT ASSIGNEE(S):

Jpn. Kokai Tokkyo Koho, 13 pp. SOURCE:

3

CODEN: JKXXAF

DOCUMENT TYPE:

Patent

LANGUAGE:

FAMILY ACC. NUM. COUNT:

Japanese

PATENT INFORMATION:

ATTENT.	THE ORMATION:

PATENT NO.				KIND DAT			ATE			PLICATION NO.	DATE		
JP 5	54036290			A	-	1.9790	0316		JP	1978-74800 1978-2702 1978-2703 1978-1954 1978-1955 1978-2127		19780620	
DK.	7802702			А		1.9781	1221		DK	1978-2702		1.978061.5	
DK. T	7802703			Α		1.9781	1221		DK	1978-2703		1.978061.5	
FI	7801954			Α		1:9781	1221		FI	1978-1954		19780619	
FI 6	54376			В		19830	0729						
FI 6	54376			С		1.9831	1.1.1.0						
FI.	7801955			Α		1.9781	1.221		FI	1978-1955		19780619	
NO .	7802127			Α		1.9781	1221		NO	1978-2127		19780619	
NO :	1.52049			В		19850	0415						
NO .	152449			C		19850	0724						
NO.	7802128			Α		19783	1221		NO	1978-2128 1978-100190			
EP :	1.67			A1.		19790	0110		Eb	1978-100190		1.978061.9	
	R: BE,	CH,	DE,	FR,	GB	, LU,	NL,	SE					
EP 3	338			A2		1.9790	0124		ΕP	1978-100191		19780619	
Eb 3	338 338			Α3		1.9790	0627						
EP.	338			BJ		.1.981	しまるり						
	R: BE,	CH,	DE,	FR,	GB,	, Lu,	NL,	SE		1978-470912 1978-470913 1978-3492 1978-3493 1978-37244 1978-917118 1978-37298 1978-4486 1979-2839 1979-104080 1980-106497			
ES 4	470912			A1.		19790	0201		ES	1978-470912		19780619	
ES (	470913			A1.		1.9790	0201		ES	1978-470913		19780619	
ZA	7803492			Α		1.9790	0627		ZA	1978-3492		1.978061.9	
ZA	7803493			Α		19790	0627		ZA	1978-3493		19780619	
AU '	7837244			A		1980	01.03		AU	1978-37244		19780619	
US 4	4278676			A		19810	0714		US	1978-917118		19780619	
AU '	7837298			A		1.9800	01.03		ΑU	1978-37298		19/80620	
AU!	521.040			B2		1.9820	0311			4000 4406		107100000	
AT '	7804486			A		19820	0215		ΑТ	1978-4486		19/80620	
AT .	368505			В		1.982	1.025			1000 0000		1020000	
NO.	7902839			A		1.978	1.221		NO	1979-2839		19790903	
US 4	4301287			A		1.981.	1.1.1.7		US	1979-104080		19/9121/	
EP :	27279			Al.		1981	0422		EΡ	1980-106497		T380T073	
	R: BE,	CH,	DE,	FR,	GB	, LU,	NL,	SE		1000 105400			
	28017								EP	1980-106498		19801023	
	R: BE,			FR,	GB	, LU,	$\mathrm{NL}$ ,	SE		1022 05210		10770600	
ORITY	APPLN.	INFO	.:							1977-25740			
										1978-917118		T3 \800T3	
וחס מינו	TDCT(5) •			MARI	ソカガ	97.31	47.5 R						

OTHER SOURCE(S): MARPAT 91:39458 GI.

OH0-MeO2CN 0 H5MIII II

= CO2Et, R1 = CO2Me, Z = O) [obtained by hydrogenating II (R = CO2Et, R1 = CH2Ph, Z = O) over Pd-C, and reacting the product with ClCO2Me] was ketalized with HOCH2CH2OH to give the ethylene acetal II (R = CO2Et, R1 = CO2Me, Z = OCH2CH2O), which was treated with H2NOH.HCl to give II (R = CONHOH, R1 = CO2Me, Z = OCH2CH2O), whose cyclization in H2SO4 gave the hydroxyisoxazolopiperidinecarboxylate. Decarboxylation of I followed by treatment with HBr and then H2O-Et3N-EtOH gave zwitterion III. III was a mild tranquilizer in mice.

64603-91-4P TT

> RL: SPN (Synthetic preparation); PREP (Preparation) (preparation and tranquilizing activity of)

64603-91-4 CAPLUS RN

Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro- (CA INDEX NAME) CN

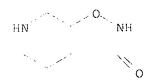


TT65202-63-3P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN

65202-63-3 CAPLUS
Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, monohydrobromide CN (9CI) (CA INDEX NAME)



HBr

L5 ANSWER 13 OF 13 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1978:37672 CAPLUS

DOCUMENT NUMBER: 88:37672

ORIGINAL REFERENCE NO.: 88:5913a,5916a

TITLE: Muscimol analogs. II. Synthesis of some bicyclic

3-isoxazolol zwitterions

AUTHOR(S): Krogsgaard-Larsen, Povl

CORPORATE SOURCE: Dep. Chem. BC, R. Dan. Sch. Pharm., Copenhagen, Den.

SOURCE: Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry (1977), B31(7), 584-8

CODEN: ACBOCV; ISSN: 0302-4369

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 88:37672

GI

The 3-isoxazolol zwitterions 4,5,6,7-tetrahydroisoxazolo[5,4-c]pyridin-3-ol, (I, n = 1, m = 1), 5,6,7,8-tetrahydro-4H-isoxazolo[5,4-c]azepin-3-ol (I, n = 2, m = 1), and 5,6,7,8-tetrahydro-4H-isoxazolo[4,5-c]azepin-3-ol (I, n = 0, m = 3) were prepared The starting materials were the cyclic  $\beta$ -oxoesters II. The ethylene acetals of II were treated with HONH2 followed by deacetalization and cyclization of the intermediate  $\beta$ -oxohydroxamic acid ethylene acetals to give the resp. 3-isoxazolol derivs. III, which were transformed into the zwitterions I. The pKA values of I were determined

TT 65202-63-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (preparation and reaction with triethylamine, zwitterions from)

RN 65202-63-3 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro-, monohydrobromide (9CI) (CA INDEX NAME)

HN NH

: O

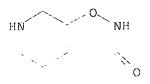
● HBx

TT 64603-91-4P

RL: SPN (Synthetic preparation); PREP (Preparation) (preparation of)

RN 64603-91-4 CAPLUS

CN Isoxazolo[5,4-c]pyridin-3(2H)-one, 4,5,6,7-tetrahydro- (CA INDEX NAME)



(FILE 'HOME' ENTERED AT 12:10:11 ON 03 JAN 2008)

FILE 'REGISTRY' ENTERED AT 12:10:24 ON 03 JAN 2008

L1 STRUCTURE UPLOADED

L2 0 S L1

L3 36 S L1 FULL

FILE 'CAPLUS' ENTERED AT 12:10:58 ON 03 JAN 2008

L4 502 S L3 FULL

L5 13 S L3/PREP FULL

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COST IN U.S. DOLLARS SINCE FILE TOTAL

FULL ESTIMATED COST SESSION 73.45 SESSION 73.45

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SINCE FILE TOTAL

CA SUBSCRIBER PRICE ENTRY SESSION -10.40 -10.40

STN INTERNATIONAL LOGOFF AT 12:11:48 ON 03 JAN 2008

## **EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
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L2	20	11 and isoxazolo	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT	OR	OFF	2008/01/03 12:13